



DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

March 19, 2010

Ms. Kathy Friesen
EnCana Oil & Gas (USA) Inc.
Environmental Coordinator EHS - South Rockies
2717 County Road 215
Suite 100
Parachute, CO 81635

Re: Investigation Activities
Former Dietrich Replacement Water Well (Moon 2) Thermogenic Gas Impact
NENE Section 10 T7S R92W, Water Well Permit 256670-A
Garfield County, Colorado
COGCC Project #2061

Dear Ms. Friesen,

The purpose of this letter is to follow up the conversations Colorado Oil and Gas Conservation Commission (COGCC) staff had with you and Mr. Brett Middleton of EnCana Oil & Gas (USA) Inc. (EnCana) February 16, 2010, and February 24, 2010 regarding the Moon 2 domestic water well. EnCana's analytical data from September 15, 2008, April 1, 2009, November 18, 2009 and February 02, 2010 sampling conducted at this well indicate that the Moon 2 water well contains not only methane, but heavier hydrocarbon gases including hexanes, that are indicative of impacts from thermogenic gas.

You indicated that EnCana is voluntarily conducting an investigation into the potential source of the increased thermogenic gas in the Moon 2 well. I will be the primary point of contact at the COGCC for this investigation.

The COGCC understands that the Moon 2 domestic water well provides household water, but not drinking water for the Moons and is also used for watering livestock. EnCana has discussed the undesirability of using the impacted water for livestock with the Moons. The COGCC has also discussed this subject with Mr. Moon.

The COGCC appreciates the proactive position EnCana has adopted towards mitigating the impacts from this situation to the Moons. The COGCC understands that EnCana has conducted the following tasks to date:

- EnCana sampled the water well in February, submitting split samples to two laboratories to confirm the concentrations of analytes detected. The water samples were collected from a spigot near the well head, prior to the water entering the storage tank in the Moon's basement.
- EnCana discussed the increased thermogenic gas detections in the Moon 2 well with the Moons.
- EnCana provided Mr. Moon with a gas meter and instructed him on its use to monitor gas levels in the basement where the storage tank is located
- EnCana emptied the storage tank located in the home's basement, refilled it with fresh well water, and recorded a lower explosivity level (LEL) of 29 % in the tank and an LEL level of 0% in the basement air
- EnCana has collected bradenhead readings and gas samples from their gas wells on the P3 and F11E pads. The COGCC requests that EnCana submit all bradenhead readings to the COGCC attached to a Sundry Form 4 (sent to Kevin King's attention) and all composition and isotopic bradenhead and production gas sample data and pressure measurements collected from wells on these two pads to the COGCC, also via a Sundry Form 4 (sent to my attention) as soon as is practicable upon receipt of the data.

The COGCC also understands that EnCana has the following additional activities planned:

- EnCana is scheduled to increase the venting system on the Moon's storage tank from a ¾" diameter vent to a 3" diameter vent on Thursday, March 11, 2010
- EnCana is scheduled to install a fixed gas detector in the Moon's basement. The gas detector should have an alarm that can be heard in the living quarters of the home.
- EnCana plans to sample both the Moon 2 well and the former Dietrich water well (now a monitoring well) monthly through April, 2010.

COGCC staff will evaluate all oil and gas wells within ½ mile of the Moon domestic water well for anomalies indicative of problems. All oil and gas wells identified by a COGCC database search within a ½ mile radius have EnCana listed as the operator.

At this time the COGCC is requesting that EnCana perform the following additional activities.

- EnCana is encouraged to provide the Moons with water for both human and livestock consumption and for household uses such as bathing/showering, while the investigation proceeds.
- COGCC is requesting that EnCana sample the water discharging from the storage tank in the basement to the household water line. Although venting is occurring in the tank, the concentration of contaminants in the water being used in the home is currently unknown.
- COGCC is requesting cooperation from EnCana in supplying all engineering and drilling documentation for oil and gas wells which COGCC identifies as wells of interest.
- COGCC is requesting the list of bradenhead testing already conducted by EnCana within ½ mile of the Moon domestic water well. The COGCC may request additional bradenhead testing in a phased approach, moving away from the Moon 2 well as the investigation progresses. COGCC will supply a list of wells for bradenhead testing with phases identified. The bradenhead testing will require a seven day shut in of the bradenheads prior to testing. During this shut in period the bradenhead pressures must be monitored to ensure excessive pressure does not develop. COGCC staff will coordinate additional testing and may be involved in witnessing the testing.
- COGCC may be requesting both bradenhead and production gas composition and isotopic gas sampling be conducted at additional wells which EnCana has not already sampled that COGCC may identify. COGCC will supply an additional list of wells for sampling. COGCC staff may be involved in collecting split samples during this sampling.
- COGCC is requesting that EnCana develop and propose a soil gas survey which includes the area between the former Dietrich well and the Moon 2 water well to aid in determining whether the thermogenic gas in the Moon 2 well is from a new source or is residual gas migrating from the impacted area near the former Dietrich water well.

Further activities may be required to fully investigate the source of the thermogenic gas in this domestic water well, pending the outcome of the activities mentioned above. All data gathered as part of these activities should be relayed to the COGCC as quickly as is reasonable after collection.

The COGCC looks forward to cooperating with EnCana in conducting this investigation to resolve the impact to the Moon domestic water well.

If you require any additional information, please call me at 970-625-2497.

Regards,

Linda Spry O'Rourke
Environmental Protection Specialist II

Cc: Brett Middleton – EnCana EHS Field Coordinator South Rockies
Dave Neslin – COGCC Director
Debbie Baldwin – COGCC Environmental Manager
Alex Fischer – COGCC Environmental Supervisor
Bob Chesson – COGCC Environmental Protection Specialist
Kevin King – COGCC NW Area Engineer